

(d) a polynucleotide encoding at least 50 contiguous amino acid residues of SEQ ID NO:2;

(e) a polynucleotide encoding the polypeptide encoded by the human cDNA in ATCC Deposit No: 75875;

(f) a polynucleotide encoding the polypeptide minus the N-terminal methionine encoded by the human cDNA in ATCC Deposit No: 75875;

(g) a polynucleotide encoding a mature portion of the polypeptide encoded by the human cDNA in ATCC Deposit No: 75875;

(h) a polynucleotide encoding a fragment of a polypeptide encoded by the human cDNA in ATCC Deposit No: 75875, wherein said fragment has enzymatic activity;

(i) a polynucleotide encoding at least 30 contiguous amino acid residues of the polypeptide encoded by the human cDNA in ATCC Deposit No: 75875;

(j) a polynucleotide encoding at least 50 contiguous amino acid residues of the polypeptide encoded by the human cDNA in ATCC Deposit No: 75875; and

(k) a polynucleotide having a sequence complementary to the polynucleotide sequence of (a), (b), (c), (d), (e), (f), (g), (h), (i), or (j).

22. (New) The isolated nucleic acid molecule of claim 21, wherein said polynucleotide is (a).

23. (New) The isolated nucleic acid molecule of claim 21, wherein said polynucleotide is (b).

24. (New) The isolated nucleic acid molecule of claim 21, wherein said polynucleotide is (c).

25. (New) The isolated nucleic acid molecule of claim 21, wherein said polynucleotide is (d).

26. (New) The isolated nucleic acid molecule of claim 21, wherein said polynucleotide is (e).

27. (New) The isolated nucleic acid molecule of claim 21, wherein said polynucleotide is (f).

28. (New) The isolated nucleic acid molecule of claim 21, wherein said polynucleotide is (g).

29. (New) The isolated nucleic acid molecule of claim 21, wherein said polynucleotide is (h).

30. (New) The isolated nucleic acid molecule of claim 21, wherein said polynucleotide is (i).

31. (New) The isolated nucleic acid molecule of claim 21, wherein said polynucleotide is (j).

32. (New) The isolated nucleic acid molecule of claim 21, wherein the polynucleotide further comprises a heterologous polynucleotide.

33. (New) The isolated nucleic acid molecule of claim 32, wherein the heterologous polynucleotide encodes a heterologous polypeptide.

34. (New) A recombinant vector comprising the isolated nucleic acid molecule of claim 21.

35. (New) The recombinant vector of claim 34, wherein the nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

36. (New) A method of producing a recombinant vector comprising inserting the isolated nucleic acid molecule of claim 21 into a vector.

37. (New) A recombinant host cell comprising the vector of claim 34.

38. (New) A recombinant host cell comprising the nucleic acid molecule of claim 21, wherein the nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

39. (New) A host cell comprising the recombinant vector of claim 35.

40. (New) A method of producing a host cell comprising transducing, transforming or transfecting a host cell with the vector of claim 34.

41. (New) A method for producing the polypeptide encoded by the nucleic acid molecule of claim 21, comprising:

(a) culturing the recombinant host cell comprising said nucleic acid molecule under conditions suitable to produce the polypeptide; and

(b) recovering the polypeptide from the cell culture.

~~42. (New) A polypeptide produced by the method of claim 41.~~

43. (New) The isolated nucleic acid molecule of claim 21, wherein said polynucleotide is double-stranded.

44. (New) The isolated nucleic acid molecule of claim 21, wherein said polynucleotide is genomic DNA.

45. (New) The isolated nucleic acid molecule of claim 21, wherein said polynucleotide is a cDNA.

46. (New) The nucleic acid molecule of claim 21, wherein said polynucleotide is DNA.

47. (New) A method of detecting the nucleic acid molecule of claim 21, comprising:

(a) obtaining a biological sample suspected of containing the polynucleotide; and

(b) determining the presence of absence of the polynucleotide in said biological sample.

48. (New) An isolated nucleic acid molecule comprising a first polynucleotide 90% or more identical to a second polynucleotide selected from the group consisting of:

- (a) a polynucleotide encoding amino acid residues 1 to 303 of SEQ ID NO:2;
- (b) a polynucleotide encoding amino acid residues 2 to 303 of SEQ ID NO:2;
- (c) a polynucleotide encoding at least 30 contiguous amino acid residues of SEQ ID NO:2;
- (d) a polynucleotide encoding at least 50 contiguous amino acid residues of SEQ ID NO:2;
- (e) a polynucleotide encoding the polypeptide encoded by the human cDNA in ATCC Deposit No: 75875;
- (f) a polynucleotide encoding the polypeptide minus the N-terminal methionine encoded by the human cDNA in ATCC Deposit No: 75875;
- (g) a polynucleotide encoding a mature portion of the polypeptide encoded by the human cDNA in ATCC Deposit No: 75875;
- (h) a polynucleotide encoding a fragment of a polypeptide encoded by the human cDNA in ATCC Deposit No: 75875, wherein said fragment has enzymatic activity;
- (i) a polynucleotide encoding at least 30 contiguous amino acid residues of the polypeptide encoded by the human cDNA in ATCC Deposit No: 75875;
- (j) a polynucleotide encoding at least 50 contiguous amino acid residues of the polypeptide encoded by the human cDNA in ATCC Deposit No: 75875; and

(k) a polynucleotide having a sequence complementary to the polynucleotide of (a), (b), (c), (d), (e), (f), (g), ~~(h)~~, (i), or (j).

49. (New) The isolated nucleic acid molecule of claim 48, wherein said second polynucleotide is (a).

50. (New) The isolated nucleic acid molecule of claim 48, wherein said second polynucleotide is (b).

51. (New) The isolated nucleic acid molecule of claim 48, wherein said second polynucleotide is (c).

52. (New) The isolated nucleic acid molecule of claim 48, wherein said second polynucleotide is (d).

53. (New) The isolated nucleic acid molecule of claim 48, wherein said second polynucleotide is (e).

54. (New) The isolated nucleic acid molecule of claim 48, wherein said second polynucleotide is (f).

55. (New) The isolated nucleic acid molecule of claim 48, wherein said second polynucleotide is (g).

56. (New) The isolated nucleic acid molecule of claim 48, wherein said second polynucleotide is (h).

57. (New) The isolated nucleic acid molecule of claim 48, wherein said second polynucleotide is (i).

58. (New) The isolated nucleic acid molecule of claim 48, wherein said second polynucleotide is (j).

59. (New) The isolated nucleic acid molecule of claim 48, wherein the polynucleotide further comprises a heterologous polynucleotide.

60. (New) The isolated nucleic acid molecule of claim 59, wherein the heterologous polynucleotide encodes a heterologous polypeptide.

61. (New) A recombinant vector comprising the isolated nucleic acid molecule of claim 48.

62. (New) The recombinant vector of claim 61, wherein the nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

63. (New) A method of producing a recombinant vector comprising inserting the isolated nucleic acid molecule of claim 48 into a vector.

64. (New) A recombinant host cell comprising the vector of claim 61.

65. (New) A recombinant host cell comprising the nucleic acid molecule of claim 48, wherein the nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

66. (New) A host cell comprising the recombinant vector of claim 62.

67. (New) A method of producing a host cell comprising transducing, transforming or transfecting a host cell with the vector of claim 61.

68. (New) A method for producing the polypeptide encoded by the nucleic acid molecule of claim 48, comprising:

(a) culturing the recombinant host cell comprising said nucleic acid molecule under conditions suitable to produce the polypeptide; and

(b) recovering the polypeptide from the cell culture.

~~69. (New) A polypeptide produced by the method of claim 68.~~

70. (New) The isolated nucleic acid molecule of claim 48, wherein said polynucleotide is double-stranded.

71. (New) The isolated nucleic acid molecule of claim 48, wherein said polynucleotide is genomic DNA.

72. (New) The isolated nucleic acid molecule of claim 48, wherein said polynucleotide is a cDNA.

73. (New) The nucleic acid molecule of claim 48, wherein said polynucleotide is DNA.

74. (New) A method of detecting the nucleic acid molecule of claim 48, comprising:

(a) obtaining a biological sample suspected of containing the polynucleotide; and

(b) determining the presence of absence of the polynucleotide in said biological sample.

75. (New) An isolated nucleic acid molecule comprising a first polynucleotide 95% or more identical to a second polynucleotide selected from the group consisting of:

(a) a polynucleotide encoding amino acid residues 1 to 303 of SEQ ID NO:2;

(b) a polynucleotide encoding amino acid residues 2 to 303 of SEQ ID NO:2;

(c) a polynucleotide encoding at least 30 contiguous amino acid residues of SEQ ID NO:2;

(d) a polynucleotide encoding at least 50 contiguous amino acid residues of SEQ ID NO:2;

(e) a polynucleotide encoding the polypeptide encoded by the human cDNA in ATCC Deposit No: 75875;

(f) a polynucleotide encoding the polypeptide minus the N-terminal methionine encoded by the human cDNA in ATCC Deposit No: 75875;

(g) a polynucleotide encoding a mature portion of the polypeptide encoded by the human cDNA in ATCC Deposit No: 75875;

(h) a polynucleotide encoding a fragment of a polypeptide encoded by the human cDNA in ATCC Deposit No: 75875, wherein said fragment has enzymatic activity;

(i) a polynucleotide encoding at least 30 contiguous amino acid residues of the polypeptide encoded by the human cDNA in ATCC Deposit No: 75875;

(j) a polynucleotide encoding at least 50 contiguous amino acid residues of the polypeptide encoded by the human cDNA in ATCC Deposit No: 75875; and

(k) a polynucleotide having a sequence complementary to the polynucleotide of (a), (b), (c), (d), (e), (f), (g), (h), (i), or (j).

76. (New) The isolated nucleic acid molecule of claim 75, wherein said second polynucleotide is (a).

77. (New) The isolated nucleic acid molecule of claim 75, wherein said second polynucleotide is (b).

78. (New) The isolated nucleic acid molecule of claim 75, wherein said second polynucleotide is (c).

79. (New) The isolated nucleic acid molecule of claim 75, wherein said second polynucleotide is (d).

80. (New) The isolated nucleic acid molecule of claim 75, wherein said second polynucleotide is (e).

81. (New) The isolated nucleic acid molecule of claim 75, wherein said second polynucleotide is (f).



82. (New) The isolated nucleic acid molecule of claim 75, wherein said second polynucleotide is (g).

83. (New) The isolated nucleic acid molecule of claim 75, wherein said second polynucleotide is (h).

84. (New) The isolated nucleic acid molecule of claim 75, wherein said second polynucleotide is (i).

85. (New) The isolated nucleic acid molecule of claim 75, wherein said second polynucleotide is (j).

86. (New) The isolated nucleic acid molecule of claim 75, wherein the polynucleotide further comprises a heterologous polynucleotide.

87. (New) The isolated nucleic acid molecule of claim 86, wherein the heterologous polynucleotide encodes a heterologous polypeptide.

88. (New) A recombinant vector comprising the isolated nucleic acid molecule of claim 75.

89. (New) The recombinant vector of claim 88, wherein the nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

90. (New) A method of producing a recombinant vector comprising inserting the isolated nucleic acid molecule of claim 75 into a vector.

91. (New) A recombinant host cell comprising the vector of claim 88.

92. (New) A recombinant host cell comprising the nucleic acid molecule of claim 75, wherein the nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

93. (New) A host cell comprising the recombinant vector of claim 89.

94. (New) A method of producing a host cell comprising transducing, transforming or transfecting a host cell with the vector of claim 88.

95. (New) A method for producing the polypeptide encoded by the nucleic acid molecule of claim 75, comprising:

(a) culturing the recombinant host cell comprising said nucleic acid molecule under conditions suitable to produce the polypeptide; and

(b) recovering the polypeptide from the cell culture.

~~96. (New) A polypeptide produced by the method of claim 95.~~

97. (New) The isolated nucleic acid molecule of claim 75, wherein said polynucleotide is double-stranded.

98. (New) The isolated nucleic acid molecule of claim 75, wherein said polynucleotide is genomic DNA.

99. (New) The isolated nucleic acid molecule of claim 75, wherein said polynucleotide is a cDNA.

100. (New) The nucleic acid molecule of claim 75, wherein said polynucleotide is DNA.

101. (New) A method of detecting the nucleic acid molecule of claim 75, comprising:

(a) obtaining a biological sample suspected of containing the polynucleotide; and

(b) determining the presence or absence of the polynucleotide in said biological sample.

102. (New) An isolated nucleic acid molecule comprising a polynucleotide selected from the group consisting of:

- (a) a polynucleotide encoding amino acid residues 1 to 277 of SEQ ID NO:4;
- (b) a polynucleotide encoding amino acid residues 2 to 277 of SEQ ID NO:4;
- (c) a polynucleotide encoding at least 30 contiguous amino acid residues of SEQ ID NO:4;
- (d) a polynucleotide encoding at least 50 contiguous amino acid residues of SEQ ID NO:4;
- (e) a polynucleotide encoding the polypeptide encoded by the human cDNA in ATCC Deposit No: 75873;
- (f) a polynucleotide encoding the polypeptide minus the N-terminal methionine encoded by the human cDNA in ATCC Deposit No: 75873;
- (g) a polynucleotide encoding a mature portion of the polypeptide encoded by the human cDNA in ATCC Deposit No: 75873;
- (h) a polynucleotide encoding a fragment of a polypeptide encoded by the human cDNA in ATCC Deposit No: 75873, wherein said fragment has enzymatic activity;
- (i) a polynucleotide encoding at least 30 contiguous amino acid residues of the polypeptide encoded by the human cDNA in ATCC Deposit No: 75873;
- (j) a polynucleotide encoding at least 50 contiguous amino acid residues of the polypeptide encoded by the human cDNA in ATCC Deposit No: 75873; and
- (k) a polynucleotide having a sequence complementary to the polynucleotide of (a), (b), (c), (d), (e), (f), (g), (h), (i), or (j).

103. (New) The isolated nucleic acid molecule of claim 102, wherein said polynucleotide is (a).

104. (New) The isolated nucleic acid molecule of claim 102, wherein said polynucleotide is (b).

105. (New) The isolated nucleic acid molecule of claim 102, wherein said polynucleotide is (c).

106. (New) The isolated nucleic acid molecule of claim 102, wherein said polynucleotide is (d).

107. (New) The isolated nucleic acid molecule of claim 102, wherein said polynucleotide is (e).

108. (New) The isolated nucleic acid molecule of claim 102, wherein said polynucleotide is (f).

109. (New) The isolated nucleic acid molecule of claim 102, wherein said polynucleotide is (g).

110. (New) The isolated nucleic acid molecule of claim 102, wherein said polynucleotide is (h).

111. (New) The isolated nucleic acid molecule of claim 102, wherein said polynucleotide is (i).

112. (New) The isolated nucleic acid molecule of claim 102, wherein said polynucleotide is (j).

113. (New) The isolated polynucleotide of claim 102, wherein the polynucleotide further comprises a heterologous polynucleotide.

114. (New) The isolated polynucleotide of claim 113, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

115. (New) A recombinant vector comprising the isolated nucleic acid molecule of claim 102.

116. (New) The recombinant vector of claim 115, wherein the nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

117. (New) A method of producing a recombinant vector comprising inserting the isolated nucleic acid molecule of claim 102 into a vector.

118. (New) A recombinant host cell comprising the isolated nucleic acid molecule of claim 115.

119. (New) A recombinant host cell comprising the nucleic acid molecule of claim 102, wherein the nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

120. (New) A host cell comprising the recombinant vector of claim 116.

121. (New) A method of producing a host cell comprising transducing, transforming or transfecting a host cell with the vector of claim 115.

122. (New) A method for producing the polypeptide encoded by the nucleic acid molecule of claim 102, comprising:

(a) culturing the recombinant host cell comprising said nucleic acid molecule under conditions suitable to produce the polypeptide; and

(b) recovering the polypeptide from the cell culture.

~~123. (New) A polypeptide produced by the method of claim 122~~

124. (New) The isolated nucleic acid molecule of claim 102, wherein said polynucleotide is double-stranded.

125. (New) The isolated nucleic acid molecule of claim 102, wherein said polynucleotide is genomic DNA.


126. (New) The isolated nucleic acid molecule of claim 102, wherein said polynucleotide is a cDNA.

127. (New) The nucleic acid molecule of claim 102, wherein said polynucleotide is DNA.

128. (New) A method of detecting the nucleic acid molecule of claim 102, comprising:

(a) obtaining a biological sample suspected of containing the polynucleotide; and

(b) determining the presence of absence of the polynucleotide in said biological sample.

 129. (New) An isolated nucleic acid molecule comprising a first polynucleotide 90% or more identical to a second polynucleotide selected from the group consisting of:

(a) a polynucleotide encoding amino acid residues 1 to 277 of SEQ ID NO:4;

(b) a polynucleotide encoding amino acid residues 2 to 277 of SEQ ID NO:4;

(c) a polynucleotide encoding at least 30 contiguous amino acid residues of SEQ ID NO:4;

(d) a polynucleotide encoding at least 50 contiguous amino acid residues of SEQ ID NO:4;

(e) a polynucleotide encoding the polypeptide encoded by the human cDNA in ATCC Deposit No: 75873;

(f) a polynucleotide encoding the polypeptide minus the N-terminal methionine encoded by the human cDNA in ATCC Deposit No: 75873;

(g) a polynucleotide encoding a mature portion of the polypeptide encoded by the human cDNA in ATCC Deposit No: 75873;

(h) a polynucleotide encoding a fragment of a polypeptide encoded by the human cDNA in ATCC Deposit No: 75873, wherein said fragment has enzymatic activity;

(i) a polynucleotide encoding at least 30 contiguous amino acid residues of the polypeptide encoded by the human cDNA in ATCC Deposit No: 75873;

(j) a polynucleotide encoding at least 50 contiguous amino acid residues of the polypeptide encoded by the human cDNA in ATCC Deposit No: 75873; and

(k) a polynucleotide having a sequence complementary to the polynucleotide of (a), (b), (c), (d), (e), (f), (g), (h), (i), or (j).

130. (New) The isolated nucleic acid molecule of claim 129, wherein said second polynucleotide is (a).

131. (New) The isolated nucleic acid molecule of claim 129, wherein said second polynucleotide is (b).

132. (New) The isolated nucleic acid molecule of claim 129, wherein said second polynucleotide is (c).

133. (New) The isolated nucleic acid molecule of claim 129, wherein said second polynucleotide is (d).

134. (New) The isolated nucleic acid molecule of claim 129, wherein said second polynucleotide is (e).

135. (New) The isolated nucleic acid molecule of claim 129, wherein said second polynucleotide is (f).

136. (New) The isolated nucleic acid molecule of claim 129, wherein said second polynucleotide is (g).

137. (New) The isolated nucleic acid molecule of claim 129, wherein said second polynucleotide is (h).

138. (New) The isolated nucleic acid molecule of claim 129, wherein said second polynucleotide is (i).

139. (New) The isolated nucleic acid molecule of claim 129, wherein said second polynucleotide is (j).

140. (New) The isolated polynucleotide of claim 129, wherein the polynucleotide further comprises a heterologous polynucleotide.

141. (New) The isolated polynucleotide of claim 140, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

142. (New) A recombinant vector comprising the isolated nucleic acid molecule of claim 129.

143. (New) The recombinant vector of claim 142, wherein the nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

144. (New) A method of producing a recombinant vector comprising inserting the isolated nucleic acid molecule of claim 129 into a vector.

145. (New) A recombinant host cell comprising the vector of claim 142.

146. (New) A recombinant host cell comprising the nucleic acid molecule of claim 129, wherein the nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

147. (New) A host cell comprising the recombinant vector of claim 143.

148. (New) A method of producing a host cell comprising transducing, transforming or transfecting a host cell with the vector of claim 142.



149. (New) A method for producing the polypeptide encoded by the nucleic acid molecule of claim 129, comprising:

- (a) culturing the recombinant host cell comprising said nucleic acid molecule under conditions suitable to produce the polypeptide; and
- (b) recovering the polypeptide from the cell culture.

~~150. (New) A polypeptide produced by the method of claim 149.~~

151. (New) The isolated nucleic acid molecule of claim 129, wherein said polynucleotide is double-stranded.

152. (New) The isolated nucleic acid molecule of claim 129, wherein said polynucleotide is genomic DNA.

153. (New) The isolated nucleic acid molecule of claim 129, wherein said polynucleotide is a cDNA.

154. (New) The nucleic acid molecule of claim 129, wherein said polynucleotide is DNA.

155. (New) A method of detecting the nucleic acid molecule of claim 129, comprising:

- (a) obtaining a biological sample suspected of containing the polynucleotide; and
- (b) determining the presence or absence of the polynucleotide in said biological sample.

156. (New) An isolated nucleic acid molecule comprising a first polynucleotide 95% or more identical to a second polynucleotide selected from the group consisting of:

- (a) a polynucleotide encoding amino acid residues 1 to 277 of SEQ ID

NO:4;

- (b) a polynucleotide encoding amino acid residues 2 to 277 of SEQ ID NO:4;
- (c) a polynucleotide encoding at least 30 contiguous amino acid residues of SEQ ID NO:4;
- (d) a polynucleotide encoding at least 50 contiguous amino acid residues of SEQ ID NO:4;
- (e) a polynucleotide encoding the polypeptide encoded by the human cDNA in ATCC Deposit No: 75873;
- (f) a polynucleotide encoding the polypeptide minus the N-terminal methionine encoded by the human cDNA in ATCC Deposit No: 75873;
- (g) a polynucleotide encoding a mature portion of the polypeptide encoded by the human cDNA in ATCC Deposit No: 75873;
- (h) a polynucleotide encoding a fragment of a polypeptide encoded by the human cDNA in ATCC Deposit No: 75873, wherein said fragment has enzymatic activity;
- (i) a polynucleotide encoding at least 30 contiguous amino acid residues of the polypeptide encoded by the human cDNA in ATCC Deposit No: 75873;
- (j) a polynucleotide encoding at least 50 contiguous amino acid residues of the polypeptide encoded by the human cDNA in ATCC Deposit No: 75873; and
- (k) a polynucleotide having a sequence complementary to the polynucleotide of (a), (b), (c), (d), (e), (f), (g), (h), (i), or (j).

157. (New) The isolated nucleic acid molecule of claim 156, wherein said second polynucleotide is (a).

158. (New) The isolated nucleic acid molecule of claim 156, wherein said second polynucleotide is (b).

159. (New) The isolated nucleic acid molecule of claim 156, wherein said second polynucleotide is (c).

160. (New) The isolated nucleic acid molecule of claim 156, wherein said second polynucleotide is (d).

161. (New) The isolated nucleic acid molecule of claim 156, wherein said second polynucleotide is (e).

162. (New) The isolated nucleic acid molecule of claim 156, wherein said second polynucleotide is (f).

163. (New) The isolated nucleic acid molecule of claim 156, wherein said second polynucleotide is (g).

164. (New) The isolated nucleic acid molecule of claim 156, wherein said second polynucleotide is (h).

165. (New) The isolated nucleic acid molecule of claim 156, wherein said second polynucleotide is (i).

166. (New) The isolated nucleic acid molecule of claim 156, wherein said second polynucleotide is (j).

167. (New) The isolated polynucleotide of claim 156, wherein the polynucleotide further comprises a heterologous polynucleotide.

168. (New) The isolated polynucleotide of claim 167, wherein said heterologous polynucleotide encodes a heterologous polypeptide.

169. (New) A recombinant vector comprising the isolated nucleic acid molecule of claim 156.

170. (New) The recombinant vector of claim 169, wherein the nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

171. (New) A method of producing a recombinant vector comprising inserting the isolated nucleic acid molecule of claim 156 into a vector.

172. (New) A recombinant host cell comprising the vector of claim 169.

173. (New) A recombinant host cell comprising the nucleic acid molecule of claim 155, wherein the nucleic acid molecule is operably associated with a heterologous regulatory sequence that controls gene expression.

174. (New) A host cell comprising the recombinant vector of claim 170.

175. (New) A method of producing a host cell comprising transducing, transforming or transfecting a host cell with the vector of claim 169.

176. (New) A method for producing the polypeptide encoded by the nucleic acid molecule of claim 155, comprising:

(a) culturing the recombinant host cell comprising said nucleic acid molecule under conditions suitable to produce the polypeptide; and

(b) recovering the polypeptide from the cell culture.

~~177. (New) A polypeptide produced by the method of claim 176.~~

178. The isolated nucleic acid molecule of claim 156, wherein said polynucleotide is double-stranded.

179. (New) The isolated nucleic acid molecule of claim 156, wherein said polynucleotide is genomic DNA.

180. (New) The isolated nucleic acid molecule of claim 156, wherein said polynucleotide is a cDNA.

181. (New) The nucleic acid molecule of claim 156, wherein said polynucleotide is DNA.

182. (New) A method of detecting the nucleic acid molecule of claim 156, comprising:

(a) obtaining a biological sample suspected of containing the polynucleotide; and

(b) determining the presence of absence of the polynucleotide in said biological sample.